PB-215 415

GUIDELINES FOR PREPARATION OF REPORTS

Federal Water Pollution Control Administration
Portland, Oregon

March 1968

DISTRIBUTED BY:

NTIS

National Technical Information Service
U. S. DEPARTMENT OF COMMERCE
5285 Port Royal Road, Springfield Va. 22151

PB 215 415

GUIDELINES

FOR

PREPARATION OF REPORTS

United States Department of the Interior
Federal Water Pollution Control Administration, Northwest Region

March 1968

Reproduced by
NATIONAL TECHNICAL
INFORMATION SERVICE
U S Department of Commerce
Springfield VA 22151

GUIDELINES

FOR

PREPARATION OF REPORTS

United States Department of the Interior
Federal Water Pollution Control Administration
Northwest Region, Portland, Oregon

March 1968

19

CONTENTS

	Page
INTRODUCTION	1
REPORT ORGANIZATION GUIDELINES	2
Preliminaries	2
Cover	2
Title Page	4
Table of Contents	4
List of Tables	4
List of Figures or Illustrations	5
Body of the Report	5
Introductory Chapter	5
Summary Chapter	6
Report of the Study	7
Reference Materials	8
Footnote and Bibliographical References	9
REPORT TYPING GUIDELINES	11
Report Outline Format	11
General Report Typing Guidelines	13
Pagination	13
Spacing	14
Margins	14
Tables	15
Photo-reduction	17
Fold-out Sheets	17
APPENDIX	18

INTRODUCTION

This small manual is prepared largely for use by the writers and typists of technical reports in the Northwest Regional offices, although others may find it useful. The material is generally presented in two sections. The first chapter, "Report Organization Guidelines," is directed primarily to the report writers. The second chapter, "Report Typing Guidelines," and the attached examples in the Appendix, are for use by report typists. Both the writer and the typist should be familiar with both sections to assist each other in attaining compatibility in report preparation efforts.

Many important factors which should be considered in undertaking a report are beyond the scope of this document. However, writers are encouraged to give thorough consideration to such matters as: choice of target audience with its inevitable impact on writing approach; advance selection of distribution lists and planning of new releases; advance planning with the report illustrator; and careful attention to sufficient and appropriate review of reports before they are sent outside our immediate offices.

The material presented in this document is admittedly plagerized liberally from A Manual for Writers of Dissertations, which is available in the Director's office at each of the laboratories and in the Regional office.

REPORT ORGANIZATION GUIDELINES

The mechanical format of reports falls into three major categories: (1) the preliminaries, (2) the body of the report, and (3) the reference materials. The three categories contain the following elements, in order of appearance:

Preliminaries	Cover Title page Contents List of Tables List of Figures
Body of report	Introduction Summary Report of the study (one or more chapters)
Reference materials . .	Bibliography Appendix

Each of the major elements, as well as each of the chapters in the "report of the study," begins on a separate page. Each title should show clearly what material is contained in that portion and should reflect that the chapter is a definite and logical division of the report. Each of these major components of reports is described below; all reports may not contain all components and subparts listed.

Preliminaries

Cover

The covers of Regional reports should always contain the following information: (1) title, (2) agency identification, and

(3) date. The Department of the Interior seal should also appear on the covers of all reports to be distributed widely outside of FWPCA. The titles of reports should be dominant on the cover and as short as possible, yet descriptive of the type of study or subject. The date is usually just the month and year of publication. The agency identification varies according to the originating office, as follows:

United States Department of the Interior
Federal Water Pollution Control Administration
Northwest Region, Portland, Oregon

United States Department of the Interior
Federal Water Pollution Control Administration, Northwest Region
Pacific Northwest Water Laboratory, Corvallis, Oregon

United States Department of the Interior
Federal Water Pollution Control Administration, Northwest Region
Alaska Water Laboratory, College, Alaska

Only limited additional information is allowed on the front cover; for instance, some reports require the official report series and number identification.

On reports which will receive wide public distribution, the Department of the Interior "statement" (see Example 1) should be printed inside the front cover, or on the back cover.

Finally, the report cover should be printed on high-quality, heavy paper and, if possible, designed by a graphic artist to enhance the attractiveness and impact of the report.

Title Page

The title page is typewritten and contains the same information as appears on the cover, with two possible additions. First, it may be important to indicate an address where requests for additional copies of the report should be sent. In addition, the title page may show the names of authors, if they were solely responsible for the study and report. Names should not appear on reports which are the result of group effort, and supervisors' names should not be included simply because a report was produced by a unit under their direction. A sample of a title page is given in Example 2.

Table of Contents

The table of contents provides the reader with an analytical overview of the material covered in the study, together with the order of presentation in the report. The table should not be so detailed as to confuse the reader and usually has a length of one or two pages. The table title is simply "Contents," and an example is given in the Appendix, Example 3.

List of Tables

On the next consecutive page after the Contents, the List of Tables indicates the table number, title, and page for all tables appearing in the report. A sample of the typing format is given in Example 4.

List of Figures or Illustrations

If many illustrations or graphs are used in the report, a list of them, showing the figure number, title and page, appears on the next consecutive page after the List of Tables. See Example 5.

Body of the Report

The report proper begins with the first page of Chapter One and follows the preliminaries outlined above. In most cases, the chapters may be readily divided into (1) introductory chapter, (2) summary chapter, and (3) the report of the study, which may be more than one chapter. Each begins on a new page and may be divided into subparts, determined by the content. Care should be taken, however, to use subheadings only when they contribute in a functional way to the presentation. All subheadings should be removable without damage to the completeness of the text. Complete integrity of the text should be secured by providing adequate transitions, with introductory and summary statements, and complete topic sentences for paragraphs. The following describes each of these three major portions of the body of the report.

Introductory Chapter

Generally entitled "Introduction," the introductory chapter usually contains most of the following information:

1. A clear and complete statement of the problem investigated or the purpose of the study.

2. A justification of the problem, establishing its importance and possibly indicating the limitations of the study.

3. A statement of the authority for the report, usually a reference to the appropriate section of the Federal Water Pollution Control Act, as amended (33 U. S. C. 466 et seq.), and possibly a letter of request for the study from another Federal agency or a State agency.

4. If appropriate, a brief resumé of the history of the problem or the context in which the study was undertaken.

5. A preview of the organization of the remainder of the report to give the reader an understanding of the relationship between various parts of the report.

6. A paragraph acknowledging the assistance of those who provided special or non-routine aid (by organization, not name).

If the writer undertakes the Introduction first, the preparation of the remainder of the report is oftentimes made easier by having precisely defined the problem, purpose, scope and mode of presentation of the report.

Summary Chapter

The summary chapter should state succinctly the more important findings and conclusions of the report, as well as recommendations. No new material appears in the summary; all summary information must be documented in the report of the study.

Findings. The findings are matters of fact bearing on the study which are important to an understanding of the conclusions and recommendations, which follow.

Conclusions. The conclusions represent judgments and interpretations resulting from the study and evaluation in the report.

Recommendations. The recommendations are statements of actions determined necessary as a result of the study and evaluation. They may include recommendations for further study to satisfy questions which remain unanswered.

Report of the Study

Specific guidelines for organizing the main report of the study cannot be given because of the wide variety of topics, methods, and purposes of reports. Obviously, the report of the study is the most important chapter or chapters of the report, and all other portions are subordinate to what is made known here. Care should be taken to present this material in a clear and orderly fashion, with chapters representing important divisions of the subject reported.

Each chapter should begin with a paragraph or two containing (a) a statement of the portion of the problem to which the chapter is devoted, (b) a description of the materials and methods used in connection with this part of the investigation, and (c) an enumeration of the points to be covered. Usually, the concluding section of each chapter should consist of a summary, indicating the

contribution of that chapter to the whole study. In other words, each chapter's purpose to the report should be clear, and brief transitions between chapters should be provided to relate each chapter to the others and to the whole.

Generally, the report of the study will include some of the following elements, grouped in chapters as appropriate: study area description (geography, economy, population, water resources, water uses, water quality), the study, methodology, results of the study, and evaluation of results. The evaluation sections or chapter should outline the logic which leads from the study results to the conclusions and recommendations. In addition to these elements, a description of the legal framework of the problem may be necessary, if changes in law or regulations are recommended.

In short, the report of the study should be complete and understandable on its own merits. The other portions of the report are meant only to emphasize the more important aspects of this major part of the report. The report of the study constitutes the fundamental information to be reported.

Reference Materials

Reference materials for technical reports always include a bibliography and may include an appendix.

The bibliography follows the body of the text and is a separate section, preceded by a division sheet containing the single word

"BIBLIOGRAPHY". The pages of the bibliography are numbered continuously from the text; the format is shown in Example 6.

If an appendix is needed, it follows the bibliography and is preceded by a division sheet simply marked "APPENDIX". It may contain original data, tables that present data of minor importance (as contrasted with tables presenting major data which are included in the text), very lengthy quotations, supportive legal decisions or laws, and pertinent documents that are not readily available to the reader. Supplementary illustrative materials, such as forms and documents may also be included. Shifting material to the appendix may keep the text from becoming unduly bulky.

Footnote and Bibliographical References

Under the pressures of report deadlines, many of us often prepare the footnote and bibliographical references for regional reports in an incomplete, inconsistent, or inaccurate form. One reason may be that the correct forms are considered too technical or complex to be researched and prepared. However, the fourth chapter of Form and Style in Thesis Writing, available in each of the regional offices, provides an easy reference of appropriate styles of many types of such notations, and contains many pages of explicit examples. Therefore, report writers and typists are encouraged to use that manual and to improve the reference notations in our published reports.

The foregoing material describes the general components of reports and their purposes, as well as some general good practices for writers to consider. The remainder of the material--Chapter Two and the Appendix--is directed primarily to the report typists. Again, however, both the writer and the typist should familiarize themselves with the material presented throughout this manual.

REPORT TYPING GUIDELINES

Northwest Region technical reports are usually prepared by many different writers and typists (sometimes more than one typist on a single report) and, as a result, often appear with many different typing styles. Therefore, the guidelines set forth in this chapter are meant to assist in uniformity of report format region-wide. They are not drawn as absolute rules of the "best" typing procedures or the "ultimate" in report appearance. They do, however, represent generally accepted practices which should be followed as closely as possible to maintain consistency and high quality in regional reports. Individual typists will employ their good judgment in adapting these guidelines to suit particular situations not covered here. The publication, Form and Style in Thesis Writing, can provide many additional answers to specific problems.

Typists are referred to the preceding chapter for assistance in understanding the overall report organization which the typing format must support visually. The following individual guidelines establish the fundamental typing format for regional technical reports.

Report Outline Format

The report outline format used in this report has been adopted as a standard for regional reports; that is, it represents the accepted manner of visually indicating major, minor, and subsequent

divisions in reports. The major consideration in formalizing this style is the importance of consistency and uniformity within each report. (Many will note that previous, more complicated styles have been abandoned for a simple format--largely because precise attention to paragraph numbering and indentations is time-consuming for the typist and distracting for the reader.) The following briefly illustrates the accepted style.

_____(top of page)_____

(6 lines to page number)

(8 lines to typing or heading)

CHAPTER TITLE

(3 lines)

Now is the time for all good men to come to the aid of their party. The quick brown fox jumped over the lazy dog.

(3 lines)

First Order Subdivisions

The quick brown fox jumped over the lazy dog. Now is the time for all good men to come to the aid of their party.

(3 lines)

Second Order Subdivisions

Now is the time for all good men to come to the aid of the lazy dog.

(2 lines)

Third Order Subdivisions. The quick brown fox came to the aid of the party.

Indentation

For the sake of easy visual identification of paragraphs, this Region has adopted the policy of indenting all paragraphs five spaces. If there are any subsequent sub-paragraphs, they are, of course, indented five additional spaces. Complicated indentation formulas are discouraged, however.

Capitalization and Underlining of Outline Headings

As exemplified throughout this report, the major headings (chapter titles) are typed in all capital letters at the top of the page (eighth line). The subsequent subdivisions are typed with initial capital letters and underscored, wherever they fall on the page; their order is indicated by changes in position, not by changes in capitalization or underlining.

General Report Typing Guidelines

Pagination

Every page is assigned a number, although not every page has its number typed on it. The initial page of any major subdivision of reports (such as the title page, the first page of the table of contents, and the first page of each chapter) and any separate figures or illustrations do not have page numerals typed on them, although a number is allowed in the series for that page.

The preliminaries of a report (see pages 1-4) are numbered with lower-case Roman numerals (i, ii, iii). This series of numbers is not often used unless the preliminaries are very lengthy.

The remainder of the report--beginning with the first page of the introduction and proceeding through the report, bibliography and references--is numbered consecutively in Arabic numerals.

When preparing material which will be reproduced on both sides of the page, the pages must be numbered with the odd numbers on the right side and the even numbers on the left side. Each chapter begins on a right-side page and has an odd number. Blank pages must be left at the end of a chapter, if necessary, to allow the next chapter to begin on a right-side page.

Spacing

The text of technical reports is usually double-spaced except in cases specifically determined by the writer. Exceptions should generally be limited to some reports of considerable length.

Margins

In order that the text might be easily read in bound reports and that the format might be consistent among our several report typists, it is suggested that the attached guide sheets be used for all reports. (See Examples 7 and 8; note that Example 8 is to be used for text to be printed on the back side of the paper.)

If the guide sheets are not used, report margins should be set approximately as follows:

Right margin:	1 inch (12 spaces) or more.
Left margin:	1-1/2 inches (18 spaces) more if the binding is bulky.
Top margin:	1-1/2 inches (8 lines) to text or heading (6 lines to page number).
Bottom margin:	1-1/2 inches, adjusted as noted below.

Special Note: The guide sheets are a good aid for insuring that no less than two lines of a paragraph appear either at the bottom of a page or at the top of a page. The bottom margin may be raised or lowered to follow this principle; and the guide sheets will indicate when the bottom margin is approaching. Along this same vein, a section title should not appear on a page without at least two lines of text under it.

Tables

Some examples of format to be used on tables are attached (Examples 9-12). In addition, the following notes will bring attention to some of the features to be included in typing tables.

Table Placement. A table should appear as near as possible to the discussion that relates to it. If possible, the table should be placed on the page with the discussion of its contents. Under no circumstances should a table precede the first discussion of its contents. If the table cannot be accommodated on the page where first mention occurs, it should normally be placed on the next page at the end of the first paragraph. Large tables, of course, are typed on a separate page from the text and placed after their first reference.

Table Titles. Table titles should be centered in all capital letters. They are not underlined. Tables should be kept short, yet descriptive.

Column Headings. A set of lines is typed to block off the complete section of column headings from the remainder of the table. Within these lines, each column heading is centered over its column. Care should be taken to keep column headings as brief as possible, using footnotes to elaborate, where appropriate.

Footnotes to Tables. Footnote notations on tables should be in lower case letters (a/) rather than numbers to avoid confusion with the numbers in the table itself.

End of Tables. At the end of each table, even after the footnotes, a line is drawn the entire width of the table (corresponding in width to those enclosing the column headings) to separate the table and its footnotes from the text of the report. On tables of more than one page in length, the final line is not drawn until the end of the last page.

Dots. At the typist's discretion, a line of "dots" (with a space between each one, if possible) is a useful guide to direct the reader from the first column to the figures which pertain to each word or phrase.

Margins. The margins of tables should correspond to those used for the text. If this is not possible on some sidehead tables, at least one inch should be allowed as a minimum binding edge.

Side-head Tables. Side-head tables should be bound in the report so that they may be read by turning one-quarter turn to the right (as in Example 10); that is, the top of the table should be on the binding edge of the page.

Photo-reduction

For tables and figures which may require paper larger than that used in the report, it may be advisable to prepare the material first and have it photo-reduced to a proper size. This method is recommended over fold-out materials. A draftsman should be consulted first to determine the dimensions of the original material and the degree of reduction which will allow readability.

Fold-out Sheets

Those illustrations, etc., which must be larger than the report paper size should be folded with attention to: allowing the title, number, and other title-block information to show without unfolding (if possible) and leaving a binding edge so that staples do not fasten them closed.

APPENDIX

DEPARTMENT OF THE INTERIOR

In its assigned function as the Nation's principal natural resource agency, the Department of the Interior bears a special obligation to assure that our expendable resources are conserved, that renewable resources are managed to produce optimum yields, and that all resources contribute their full measure to the progress, prosperity, and security of America, now and in the future.

EXAMPLE 2 -20.

POTATO PROCESSING WASTES

Progress Report on Pilot Plant Studies of Secondary Treatment

Prepared by

Robert W. Vivian, Kenneth A. Dostal

Report No. PR-4

United States Department of the Interior
Federal Water Pollution Control Administration, Northwest Region
Pacific Northwest Water Laboratory
200 South Thirty-fifth Street
Corvallis, Oregon 97330

January 1968

CONTENTS

Chapter		Page
I.	INTRODUCTION	1
	Problem	1
	Authority	1
	Objective and Scope	2
	Acknowledgments	3
II.	SUMMARY	4
III.	DESCRIPTION OF PROCESSING PLANTS	5
IV.	WASTE TREATMENT PLANT	7
	Description	7
	Efficiency	7
V.	PILOT PLANTS	10
	Description	10
	Operation	10
	Results	12
VI.	PRELIMINARY COST ESTIMATE	21
VII.	DISCUSSION	23
BIBLIOGRAPHY		26
APPENDIX A.	Memorandum of Understanding	29
APPENDIX B.	Data	31
APPENDIX C.	Analytical Procedures	45
APPENDIX D.	Figures	50

LIST OF TABLES

Table		Page
1	Waste Production per Ton of Raw Potatoes	6
2	Operational Characteristics of Primary Clarifier	9
3	Pilot Plant Feed Rates	12
4	BOD_5 Loadings and Plant Efficiencies	18

LIST OF FIGURES

Figure		Page
1	Flow Diagram of Primary Treatment Plant	8
2	Flow Diagram of Pilot Plants	10
3	Hydraulic Loading Pattern, 1967	14
4	Variation in pH	15
5	Temperature Changes of Waste Stream	16
6	Alkalinity and Volatile Acids Relationships . .	22
7	Total Volatile Solids Reduction	23
8	Pond II COD_s Loadings and Reductions	24
9	Pond III COD_s Loadings and Reductions	25
10	Preliminary Estimate of Annual Charges	33

BIBLIOGRAPHY

Almack, John C. Research and Thesis Writing. Boston: Houghton Mifflin Company, 1930.

Bradford, William. Of Plymouth Plantation, 1620-1647. Edited by Samuel E. Morison. New York: Alfred A. Knopf, 1952.

Cross, Ira H., Stuart Daggett, and Carl C. Plehn. The Dependent Aged in San Francisco. University of California Publications in Economics, Vol. V, No. 1. Berkeley, California: University of California Press, 1928.

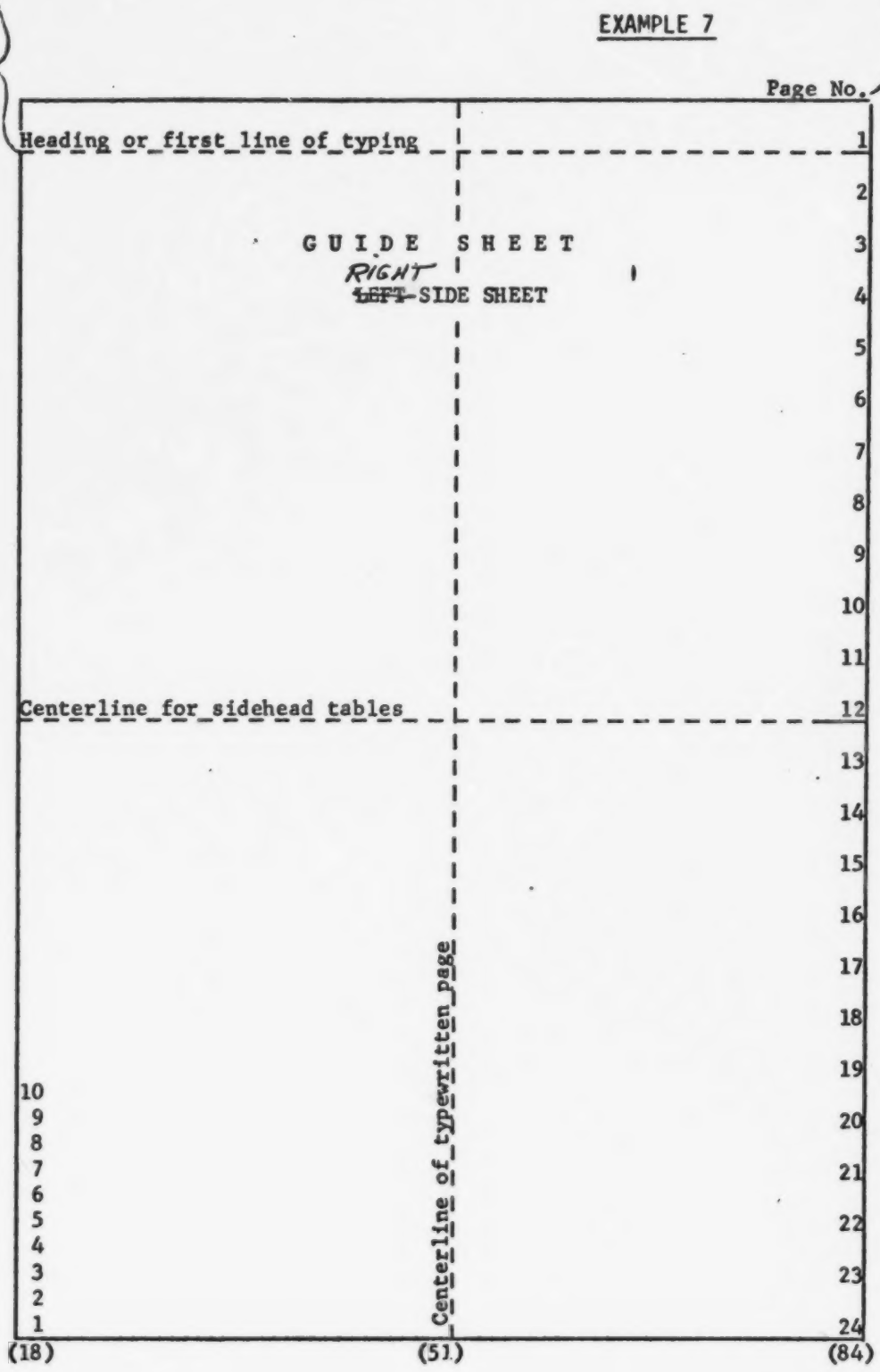
Hard, William. "The Fight at Niagara," The Reader's Digest, August, 1953, pp. 27-32.

Holland, Harold C. "Dynamics: Some New Perspectives." Paper read at the National Science Laboratory, Northtown, New Jersey, May 11, 1953.

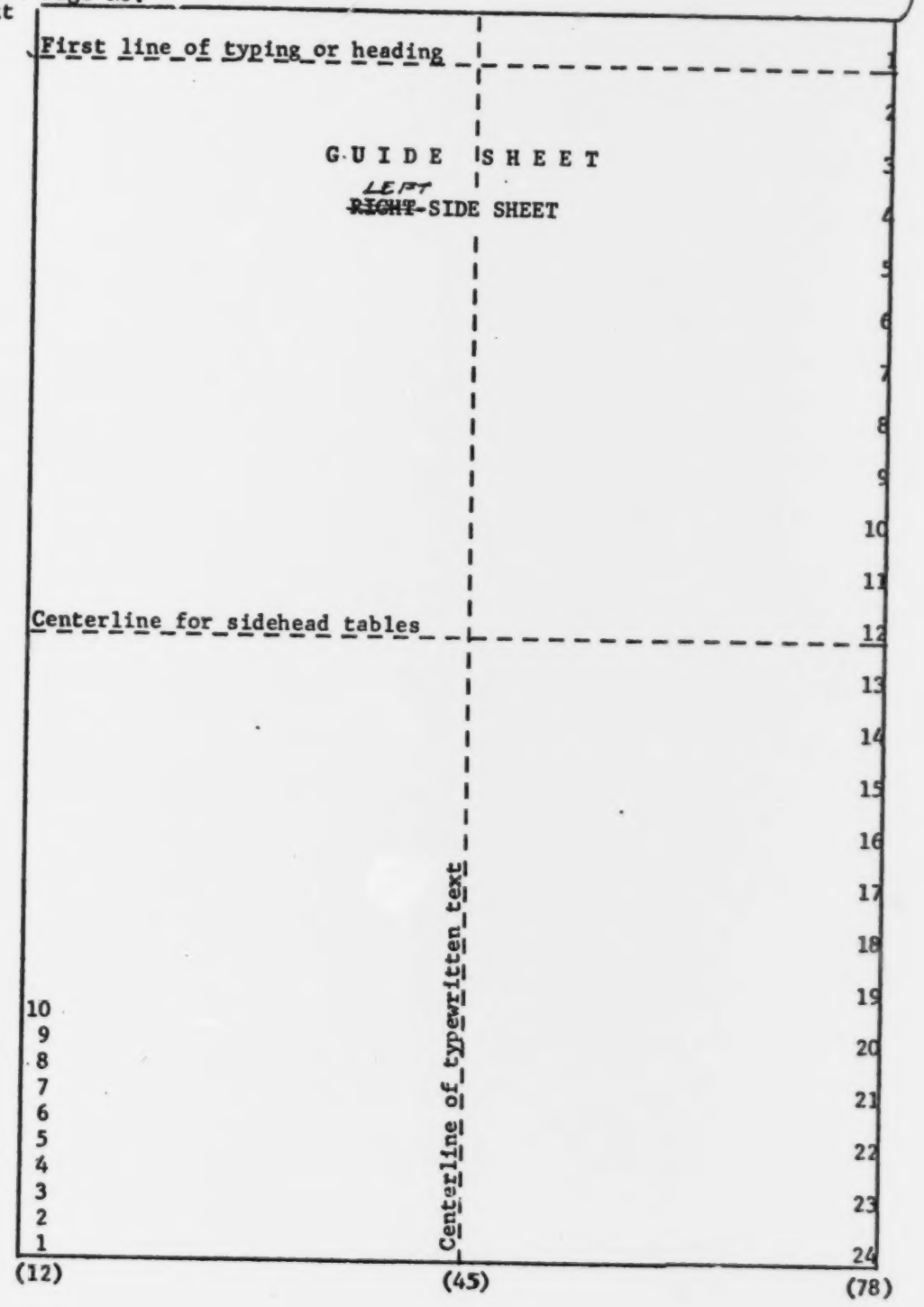
United States Congress, Senate, Committee on the Judiciary. Federal Construction Contract Act. Hearings before Subcommittee, 82d Congress, 2d Session, on S. 2907, April 29-June 3, 1952. Washington: Government Printing Office, 1952.

Wagner, H. R. "Hispanic Americana in the John Carter Brown Library," Essays Honoring Lawrence C. Wroth. Portland, Maine: Anthoensen Press, 1951, pp. 72-108.

EXAMPLE 7


Eight Single Spaces to Text
Six Single Spaces to Page No.
Page No.
Heading or first line of typing
1
2
GUIDE SHEET
3
RIGHT
~~LEFT~~ SIDE SHEET
4
5
6
7
8
9
10
11
Centerline for sidehead tables
12
13
14
15
16
17
18
19
20
21
22
23
24
10 9 8 7 6 5 4 3 2 1
Centerline of typewritten page
(18)
(51)
(84)

EXAMPLE 8


Eight Single Spaces to Text
Page No.
Six Single Spaces to Page No.
First line of typing or heading
GUIDE SHEET
LEFT
~~RIGHT~~-SIDE SHEET
Centerline for sidehead tables
Centerline of typewritten text
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
10 9 8 7 6 5 4 3 2 1
(12)
(45)
(78)

All analyses were performed according to the twelfth edition of Standard Methods with the exception of volatile acids and the National Canners' Association modified chemical oxygen demand test (COD_m). [3] These are described in Appendix C. Tests included: pH, temperature, alkalinity, total dissolved organic carbon, volatile acids, solids, COD_s, COD_m, BOD_5, and inorganic nutrients. All data collected are presented in Appendix B.

Table 3 presents the feed rates and detention times for the three primary periods of operation of the two lagoons. Figure 3 presents the hydraulic loading rates for the entire period of January 2 to May 27, 1967.

TABLE 3

PILOT PLANT FEED RATES

Period	Pond II - Anaerobic		Pond III - Aerobic	
	Q gpm	Detention Time Days	Q gpm	Detention Time Days
2/23-3/20/67	4.0	8.8	4.0	8.8
3/29-4/23/67	7.0	5.0	7.0	5.0
4/30-5/27/67	15.0	2.4	15.0	2.4

Results

pH and Temperature. Fluctuations in pH in the primary clarifier effluent, anaerobic pond II effluent, and aerobic pond III effluent

TABLE 4

BOD_5 LOADINGS AND PLANT EFFICIENCIES

Period	Treatment Process	BOD_5 Loading[a/]	Reduction - Percent				
			BOD_5	COD_5	TDOC	SS	TVS
2/23-3/20/67	Primary clarifier	--	41	23	--	57	36
	Anaerobic pond	11	25	33	--	82	48
	Aerobic pond	8	88	49	--	-230	23
	Overall	--	95	73	--	74	74
3/29-4/23/67	Primary clarifier	--	44	50	26	70	51
	Anaerobic pond	22	12	15	2	35	29
	Aerobic pond	20	87	58	38	-75	33
	Overall	--	94	82	55	66	77
4/30-5/27/67	Primary clarifier	--	41	47	18	69	62
	Anaerobic pond	46	13	15	10	52	33
	Aerobic pond	40	64	28	17	-226	12
	Overall	--	81	68	39	51	66

a/ Pounds per 1,000 cubic feet per day.

EXAMPLE 10

-29-

Treatment Practices

Removal Efficiencies. Efficiencies of treatment processes with synthetic textile wastes are essentially the same as with other wastes of similar strength. Typical wasteload removal efficiencies are shown in Table 38.

TABLE 38

TREATMENT REMOVAL EFFICIENCIES

Treatment Method	Removal Efficiency (Percent) BOD	SS	TDS
Screening	0 - 5	5 - 20	0
Plain sedimentation	5 - 15	15 - 60	0
Chemical precipitation	25 - 60	30 - 90	0 - 50
Trickling filter	40 - 85	80 - 90	0 - 30
Activated sludge	70 - 95	85 - 95	0 - 40
Lagoon	80 - 80	30 - 80	0 - 40
Aerated lagoon	50 - 95	50 - 95	0 - 40

Rates of Adoption. The tremendous growth rate of the synthetic textile industry is expected to continue and increase as various new materials (modifications of existing fibers) and new fibers are introduced to the public. Concurrent with this growth, a nearly equal increase in wasteload seems imminent. This, along with pressures by regulatory agencies regarding stream pollution, will lead to increased rate of adoption of waste treatment practices in the future.

Synthetic textile wastes have generally been treated by biological methods with good removal efficiency at reasonable cost. In the future, it is expected that water requirements per unit production will be reduced resulting in a plant effluent which will be higher in pollution concentration and lower in volume. Therefore, the adoption of more elaborate waste treatment facilities utilizing pretreatment and tertiary polishing can be expected.

Toxic metallic ions in dye wastes can retard biological oxidation when present in high concentrations. Chemical pretreatment may therefore become a requirement, or the industry may choose to adopt treatment by chemical coagulation as the principal method.

EXAMPLE 12

TABLE 17

AVERAGE DAILY WASTE LOADS DISCHARGED BY
GEORGIA-PACIFIC MILL AT BELLINGHAM, WASHINGTON

Analyses	Pulp Mill		Board Mill	
	#/Ton of Production	Tons/ Day	#/Ton of Production	Tons/ Day
BOD_5	519	139	32.1	0.5
COD	2,547	677	105.7	1.7
SWL[a/]	22,960	6,032	316	5.0
Total sulfur	149	39.5	--	--
Total solids	2,154	571	126	2.1
Volatile	1,663	427	75	1.3
Suspended solids . . .	43.4	12.6	64.9	1.1
Volatile	38.6	11.0	40.2	0.6
Supernatant suspended solids	19.2	5.2	39.0	0.6
Average tons production per day (air dried)	527		40	
Average percent volatile suspended solids loss . . .	1.9		2.0	
Average waste volume, mgd . .	32.6		1.2	

a/ Weight of a 10 percent solids solution, per ton or per day, as indicated.

per day of digester strength liquor are directed to a fermentation plant where a yeast culture produces alcohol by utilization of the fermentable sugars in the liquor. About 11,000 gallons per day of